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THE "ROAD KING" TRUCK

Designed and Manufactured

by

MCCULLOUGH MOTOR CORPORATION

Lehighton, Pennsylvania

Phone
Mantzville 146

SPECIFICATIONS FOR "ROAD KING"

Overall length - 35'
Overall width - 96"
Overall height - 12' 1 3/4" (empty)
Inside width - 91"
Inside height - 7'4"
Cubic area of cargo compartment - 1700 cu. ft.
Empty Weight - With Cummins JT6B - 16,000# TT
With White 250AD - 15,000# TT

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CONSTRUCTION

GENERAL: The general construction is of integral type, with no separate chassis and body units when the truck is completed. This type of construction distributes stress and load over the exterior body panels and into the structural members. The advantage of this construction is elimination of weight other than what is required for proper strength. Through lower weight, better performance and easier handling is achieved, with greater fuel economy and lower maintenance.

"ROAD KING" trucks are completely tooled and jigged, with subassemblies built on fixtures, insuring inter-changeability of corresponding parts.

PANELING: The gleaming, eyecatching, beautiful exterior of the body of the revolutionary "ROAD KING" is a combination of reinforced fiberglas plastic and Reynolds Lifetime Aluminum.

The paneling is of light-weight aluminum sheets riveted to the body structure. The "ROAD KING" is skin stressed, with the strength of aluminum sheeting, which is as strong as structural steel. Since it is light in weight, it reduces the weight of the vehicle, adds extra payload capacity, therefore, more payload. "ROAD KING" body cannot rust or rot - never needs paint for weather protection, yet takes paint beautifully for the streamlining effect on "ROAD KING".

"ROAD KING" bodies incorporate aero-type design - meaning stress-bearing construction - which resists impacts and absorbs pressure.

The use of Reynolds Lifetime Aluminum in heavy-duty freight-hauling trucks has many specified advantages, such as: Durability for toughest jobs; Easier road handling; Less costly parts repairs; Less engine and tire wear; Light weight for extra payload and profits; Lower maintenance costs; and lower operating costs.

FLOORING: The new extruded aluminum floor in the "ROAD KING" has interlocking joints that run the entire length of the vehicle. Vertical "fingers" on interlocking joint provides spring action for tightness of joints, greater strength and ventilation of the cargo.

REAR DOORS: The rear door is a full-swing, four-hinge each side, double-panel combination found exclusively on "ROAD KING" light-weight aluminum vans. An optional feature is a 7' side door, built on the same principle as the rear doors.

PLASTIC: Reinforced fiberglas plastic has been incorporated with Reynolds Metals aluminum in the original design and construction of the "ROAD KING" in order to produce a light-weight, heavy-duty vehicle that will withstand the rugged service conditions that are expected in heavy freight hauling operations. For example: The ball cap, a big, reinforced plastic part that goes across the top-front section of "ROAD KING" is joined with the front walls of the body. This portion of the vehicle is exposed to many possible hazards. It may be whipped by the branches of road-side trees as the truck speeds along the highway, slashed by low-hanging wires or beaten to pieces when the driver misjudges the clearance of a bridge or underpass. The reinforced plastic nose sections are tough and resilient, able to withstand much of this rough treatment without damage.

The sections encasing the windshield and head lamps are also fashioned from reinforced fiberglas plastic. Head lamps and turn signals are recessed into the plastic protecting them from breakage.

Skirting on either side of the stream-lined aluminum body is also constructed of plastic. These skirts are hinged to afford easy accessibility to the understructure whenever necessary. The rear skirt, of original design, is also made of plastic. This serves as a holder for the rear lights, stop lights, turn signals, and reflectors. It also bears the handsome "ROAD KING" crest.

Since weight reduction is of utmost importance to truckers, plastic has been used in place of heavy metals on "ROAD KING" wherever possible, gaining much more strength.

The co-efficient of expansion between plastic and aluminum is almost exactly the same, so plastic and aluminum have the same expansion rate, which eliminates stress and strain at joints due to heat and cold.

McCullough Motor Corporation, designers and builders of the "ROAD KING" have combined modern, stream-lined styling and attractive appearance with serviceability, durability, and strength.

All the plastic components are produced in our own plastics division of the manufacturing plant.

FASTENINGS: The strongest fastenings available to the industry are utilized in securing enumerable parts on "ROAD KING". Among others is the modern, high-tension aluminum Huckbolt, pretempered to lock automatically at over a ton of pressure. They can't lock until that much pressure has pulled components tightly together; and once locked, they can't come loose.

This lockbolt is industry's newest answer to weld weakness and rivet wiggle. The side skin panels of Reynolds Lifetime Aluminum are securely fastened with Huckbolts.

Structural rivets on ROAD KING" are all aluminum throughout. All hardware is cadmium plated, will not rust.

INSULATION: Insulation for cab and cargo compartment is of fiberglas blankets. This insulation is inserted between the aluminum sheeting and the 1/4" plywood liner of the cargo compartment. Insulation of the cab allows for a more quiet interior which is easier to keep cool in summer and warm in winter.

Fiberglas gives maximum protection to perishable loads. It will not rot, absort moisture, mildew, or support vermin; it is fire resistant and resists most acids.

LINING FOR CARGO COMPARTMENT: 1/4" plywood is used for walls, ceiling and floor of cargo compartment when lining is part of specifications for individual requirements.

CAB

The cab is finished in every detail. Constructed of reinforced fiberglas plastic, the ceiling, floor, instrument panel, and dash board provide a practical, attractive appearance.

WINDSHIELDS: The large, carefully engineered, panoramic windshields give clear vision and unobstructed view. E-Z-Eye windshields are tinted a soft blue-green color to protect eyes from the constant strain caused by sun and sky glare and oncoming headlights while on a long haul. These

features add to the safety and ease of driving. They also tend to keep the truck cab cool in summer.

The inverted windshield is 26" x 9', the largest commercial windshield on any highway vehicle. It is a complete wraparound job which affords extremely good visibility. Because of the inverted feature it tends to wash down and off the snow and ice in winter time.

WINDSHIELD WIPERS: Air operated windshield wipers are standard equipment on "ROAD KING" vans. A heavy-duty wiper designed to give satisfactory service, is engineered and built especially for that use. These wipers have the powerful action needed to keep swinging even under the toughest going....the rugged construction and dependable mechanism to give many extra thousands of miles of trouble-free service. These windshield wipers have a cleaning arc of 46 degrees on a curved windshield, and 18" blade mounted on a 16" arm.

CAB DOORS: Cab doors are built entirely of aluminum and plastic with a flush-type outside door latch to carry out the streamline design throughout. The latches are extremely easy to operate. When doors are closed, they are well sealed.

SEATS: The driver's and helper's seats are of comfortable foam rubber construction. Driver's seat is 6-way adjustable and the helper's seat tilts forward to provide room for using sleeping compartment.

SLEEPER: The sleeper is recessed in the cab floor under the driver and helper seats. The 4" air foam mattress is covered with a heavy duck material. The sleeping area is 26" wide by 72" long, and is one of the largest in any commercial vehicle.

CAB WINDOWS: The cab door windows are of sliding aluminum frame construction. They are also made of the E-Z-Eye plate glass.

HEATER: Hunter Thermostatic Control Heater gives ideal temperature at all times, whether engine is running or not. The heater is mounted on a reinforced plastic ease which serves as a tool compartment.

HORNS: A dual air horn is provided, in addition to electric type.

MIRRORS: West Coast, 6" x 18" rear vision mirrors are used on "ROAD KING" trucks. They are constructed of plate glass to assure clear vision; ruggedly mounted in gleaming chrome and vibration free, the silvering is guaranteed against tarnish or discolor. The glass is floated in patented rubber channel and can easily be replaced if broken. The bracket mountings are also of gleaming chrome.

AUTOMOTIVE GEAR

MOTIVE POWER - ENGINES: Engines are selected to give maximum performance for each type truck, for maximum power, ability and economy of operation.

The White Super Power engine is designed and engineered to give maximum power and performance, and long, trouble-free operation. Built to precision standards in the White factory, it has been thoroughly tested before being installed.

The Cummins Diesel Engine brings you Turbodiesel horsepower in a compact, lightweight package. It is now possible to operate heavy-duty trucks with excellent performance and economy benefits of diesel without sacrificing payload capacity.

Engine - 250-AD White
Bore and Stroke - 4" x 4½"
Displacement - 340 cubic inch
Torque - 275 lb. ft. @ 1200-1400 rpm
Crankshaft - 7 main bearings
Horsepower - 145

Engine - JT-6-B Cummins Diesel
Bore and Stroke - 4 1/8" x 5"
Number of Cylinders - 6
Horsepower - 175
Crankcase Oil Capacity - 4 gallons
Net Weight w/stand. acc. - 1615 lb.

MUFFLERS: Engine-mated Alexander-Tagg Industries, Inc., heavy-duty mufflers are used on "ROAD KING" units. These mufflers fit truck engines, not just exhaust pipe, affording minimum back pressure,

maximum noise reduction, longer muffler life, and greater savings.

AIR FILTER: The PurOlator Dry Type Air Filter is used on the engine of "ROAD KING" to minimize engine wear. This new dry type Micronic element is capable of removing 99% of all foreign substance from the air that enters the engine.

COOLING SYSTEM: The Perry Filter cooling-system filter-conditioner is designed to give complete protection by incorporating mechanical filtration, chemical additions, and electro-chemical protection into one thoroughly practical yet economical preventive device. This cooling-system filter and conditioner used on the ROAD KING is the original and only Electro-Chemical system known. Constant five-way cleaning action assures complete, even engine cooling for trouble-free operation the year around.

The use of a Perry Water Conditioner will extend engine life between overhauls due to keeping the inside of the engine block clean in the water passages, eliminating scale and corrosion which retard passage of heat from cylinder walls and head surfaces. This build-up of heat, due to scale and corrosion, results in increased engine wear and failure of oil film on pistons and rings. When the cooling system fails to remove its proper share of engine heat, this excess heat must be removed by the oil, causing the oil to break down also and thus causing excessive engine wear.

Rust and corrosion act as insulation preventing heat transfer to cooling medium. The filter has replacement element to keep water conditioned.

STEERING GEARS: Ross Model TE75 with 28.1 ratio has been chosen to steer the new, modern, streamlined "ROAD KING". Ross gears are the most adaptable gears, since they are distinguished for long life, simplicity of adjustment, and maintenance of long-recognized qualities of steering ease, safety, stability, and performance.

POWER AXLES: The QT340 two-speed axle by Timken-Detroit, used with Fuller 5C65 transmission, gives unequalled flexibility. It gives "ROAD KING" an almost unlimited choice of gear ratios.

The QT140 single-speed axle is used with the R46 Road Ranger, also giving a flexible combination.

Timken-Detroit axles not only give you a much wider power range, but also all the advantages of a stronger, sturdier, smoother operating design. Some of the important reasons why Timken-Detroit axles are used in "ROAD KING" trucks are: Longer axle life, Fewer repairs, Higher fuel economy, Lower operating cost, and Higher profits.

STEERING AXLE: 11,000 lb. capacity front axle is built to support heavy loads. The wide spindle centers provide for a 40 degree turning, making it easy to maneuver. The Shuler FE11 is used on tandem suspension in the TT model.

DEAD AXLE: Shuler Model T18C 18,000 pound capacity axle, 5" tube, equipped with 16½" x 6" air brakes, hubs and drums for 10 stud 11½" BC Budd Dual Wheels, 71½" track.

FRONT SUSPENSIONS: Vertical loads are taken directly by four air cells, constructed of rubber and fabric like a tire. These cells, on the interior, have solid rubber bottoming bumpers at the center and ends. Jarring, jolting road shocks are all absorbed by the flexible, strongly constructed air cells. Through ingenious leveling valves, air is metered to the system as load conditions change. These maintain constant vehicle height and uniform ride.

TRANSMISSION: "ROAD KING" trucks may be had with either model 5C-65 or R-46 Road Ranger Transmissions. The transmissions give selective gear ratios, evenly and progressively spaced. *Easier, quicker shifts. *One-shift lever complete control of ratio selection. *Higher average road speeds - engine operates in peak h.p. range with greater fuel economy. *Less driver fatigue - one-third less shifts. *Range shifts pre-selected automatic and synchronized. *More cargo on the payload axles.

Heavy-duty Fuller transmission 5C-65 is a 5-speed gear box direct in 5th gear. Ten forward and one reverse speeds with a two-speed rear axle.

Fuller R-46 Road Ranger transmission has eight forward and two reverse speeds. The single reduction rear axle makes driving easier and engine life longer due to better splitting of gears. Four speeds forward and one reverse in low range. Between 4th and 5th the split is made, and 1st becomes 5th, 2nd becomes 6th, 3rd becomes 7th, and 4th becomes 8th. Only one split shift between fourth and fifth is made. This transmission makes it possible for the driver to operate the engine in the recommended r.p.m. range for maximum engine life.

CLUTCH, SHIFT, & BRAKE: The clutch, shift, and brakes are operated by American Chain & Cable Tru-Lay Push-Pull Controls. The clutch is manual with air assist to reduce driver effort to a minimum. The controls transmit positive control impulses directly to any desired point. They are designed and built to have the following characteristics: Smoothness, Accuracy, Long Life, High Load Capacity, Freedom from Trouble, and Flexibility. The inner member and conduit on these precision-built assemblies are lubricated for life.

AIR SYSTEM

AIR SYSTEM: Each air line is secured on every cross member or a maximum of every 24", whichever is first, with a rubber-coated clamp to prevent air leaks and to assure the minimum amount of leakage or breakage through vibration.

AIR POWER STEERING: Now, no matter how much weight you are carrying or how slowly you are rolling, the grueling effort required to steer is eliminated completely in the "ROAD KING" with the use of Bendix-Westinghouse Air-Power Steering. Some of the advantages of Bendix-Westinghouse air-power steering are: *Less driving fatigue on long runs requiring frequent turning. *Saves time, patience, and strength when maneuvering "ROAD KING" in narrow alleys or streets. *Effortless steering steps up reaction time in case of emergency. *Makes possible increases in payload while still retaining complete steering control. *Makes truck driving easy - helps hold GOOD drivers.

AIR BRAKES: Commercial vehicles equipped with positive, powerful, economical, Bendix-Westinghouse air brakes roll confidently along the nation's highways and streets. These brakes are acknowledged by operators and owners everywhere as "TOPS IN STOPS". Smooth, sure-acting Bendix-Westinghouse air brakes step up schedules, safety, and profits on rugged runs. These mighty brakes deliver the extra stopping power and performance that assure maximum control - anywhere, anytime. As a result unnecessary slowdowns are eliminated because drivers know they can stop. Thus, trip speeds can be increased, heavy pay loads carried safely. Bendix-Westinghouse air brakes require less maintenance; overhead comes down because trucks stay on the job.

EMERGENCY BRAKES: The emergency brake on the "ROAD KING" ties into the power axle, which has a 7" x 16½" shoe. It is manually controlled from front to rear. There is a Bendix-Westinghouse valve in the manual mechanism. When manual pressure is applied, pressure is delivered by an assist valve from an isolated reservoir and brake chamber to brake chambers on the power axle. This is a complete separate air system. However, even if all air supply fails, the brake can still be operated manually.

ELECTRICAL SYSTEM, WIRING, INSTRUMENTS, LIGHTS

12 VOLT ELECTRICAL SYSTEM: The "ROAD KING" has a 12-volt electrical system. The primary wire and automotive loom utilized in "ROAD KING" wiring is unequalled for long life and dependability, and complies with I. C. C. Regulations.

WIRING: Three junction boxes - one under the cab, one in rear, and one at the engine. They are designed to give easiest possible maintenance. All wires are numbered for easy tracing, and chart in each box indicates use of each wire.

LIGHTS: Directional signals, cab, and cargo lights, reflectors and marker lights are not only signals of safety and convenience. They are symbolic of the quality consciousness of you, the truck owner and operator. They offer visible proof also of our sincerity in furnishing the very finest.

Two- sealed-beam type headlights are recessed in the front body plastic panel, with a foot-controlled dimmer switch.

There are dome lights both cab and cargo. Cargo light is shielded to prevent damage.

Clearance lights as follows:

Rear top - 5 red; 1 left, 1 right, 3 center
Front top - 5 amber: 1 left, 1 right, 3 center
Left side - 2 red: 1 rear top, 1 rear bottom
2 amber: 1 front bottom, 1 center
Right side - 2 red: 1 rear top, 1 rear bottom
2 amber: 1 front bottom, 1 center

REflectors as follows:

Right side - 1 red, rear bottom; 1 amber, front bottom
Left side - 1 red, rear bottom; 1 amber, front bottom
Rear - 2 red, bottom

"ROAD KING" is also equipped with Signal-Stat, the amazing directional signal switch that not only signals the turns but also acts as a flare for disability warning.

60 amp., 12 volt generator is standard for adequate electrical reserve.

INSTRUMENTS: The instrument panel is located ahead of the steering assembly, placed at an angle to minimize windshield reflections. It includes Speedometer, Tachometer, Air Pressure Gauge, Oil Temperature Gauge, Ammeter, Fuel Pump Gauge, Warning Signals, Water Temperature Gauge, and Oil Pressure Gauge.

Grouped directly underneath the instruments are the switches for lights, heater, defroster, instruments, cab lights, cargo lights, marker lights, and auxiliary.

Two control buttons located at the right of the instrument panel near the center post control the twin windshield wipers.

Dry road - slippery road switch, controlling the brakes, is at the left of the instrument panel.

The instruments are indirectly lighted, with dials having large, easily read numerals.

Warning lights on the instrument panel are supplemented by warning buzzers, insuring the attention of the driver.